

## **REMARKS**

Applicant respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Applicant thanks the Office for withdrawing the prior objection and rejections under 35 U.S.C. § 112.

### **I. Status of the claims**

Claim 1 is amended to recite that the size of the bacteria is measured using at least one technique selected from the group consisting of flow cytometry, determination of relative permittivity, and microscopy, as described in the specification at page 6, lines 29-31; page 13, line 30 to page 14, line 22; page 15, lines 3-12; page 16, lines 14-16; and page 17, line 17 to page 18, line 11. No new matter is added. No other changes to the claims are made. Accordingly, claims 1-6, 8-10, 12-17, and 19-23 are now pending in this application.

### **II. Obviousness-type double patenting**

The claims are provisionally rejected for obviousness-type double patenting (ODP) over application 10/590,658.

Applicant respectfully traverses. The ODP rejection is improper because the cited application xx/xxx,xxx represents an unpatented set of claims that cannot properly establish a case of ODP. By virtue of its pendency, application xx/xxx,xxx presents no basis for ODP, and would only properly evoke ODP upon allowance and issue. Simply put, one cannot have “double patenting” until a first patent exists. Accordingly, the ODP rejection is erroneous and should be withdrawn. Alternatively, Applicant requests holding in abeyance this rejection, pending indication of allowable subject matter.

### **III. Non-Obviousness**

The claims stand rejected as obvious over the combination of US 2004/0115308 (“Bengtsson-Riveros”) US 6,306,638 (“Yang”), Hayakawa et al., J. Ferm. Bioeng., Vol. 70, No. 6, p. 404-408, 1990 (“Hayakawa”), and Van de Guchte et al. Antoine van Leeuwenhoek,

Vol 82, pp 187-216 (2002) alone, or in further combination with either of US 2004-0175407 (“McDaniel”), US 3,228,838 (“Rinfret”), and US 2,364,049 (“Bensel”).

Applicant respectfully traverses.

**A.** The art does not teach all elements of the claims

Claim is amended to recite that “the adaptation of the bacteria is determined by measuring the size of the bacteria using at least one technique selected from the group consisting of flow cytometry, determination of relative permittivity, and microscopy.” There is no prima facie case under § 103 because the Office has not identified art supporting these elements.

**B.** The rejection relies on an unsupported assumption

At page 3 of the Action, the Examiner considers that van de Guchte et al. discloses “that, in response to stress conditions such as cold, heat, osmotic, or acid stress, bacteria enter a stationary phase” (pg. 205, “Starvation response and stress tolerance”) and that “lactococci have adapted to stress conditions by entering in a stationary phase which leads to a diminution in cell size (pg. 205, 2nd column, top paragraph continuation of previous column).

It appears that the Examiner extends the explicit disclosure contained in page 205, which addresses the question of *starvation* response, to all physicochemical stresses. This reference actually does not explicitly disclose the influence of physicochemical stresses other than nutrient starvation on the size of the bacteria. Thus, while “*adaptive responses appear to be a usual mode of stress protection in LAB*”(abstract), “***Nutrient starvation leading to growth arrest is generally associated with the modification of cell morphology. Cell division at the entry into stationary phase leading to a diminution of cell size, [ . . . ]***” (page 205, 2<sup>nd</sup> column, emphasis added). It is therefore incorrect to assume that a modification of cell size occurs in response to other stressors.

This is particularly pertinent given that the authors report adaptive responses to physicochemical stresses such as: acid, cold, heat, osmotic pressure, bile, nutrient (especially, sugar or phosphate or nitrogen) starvation but do not mention size changes in response to anything other than nutrient starvation.

Because this defect of van de Guchte is not remedied by other cited art, the obviousness rejection is not well-founded.

### **CONCLUSION**

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

Examiner King is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 25-Mar-2011

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